



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

|                        |               |
|------------------------|---------------|
| Application Number     | 10/820,328    |
| Filing Date            | April 7, 2004 |
| First Named Inventor   | John Santhoff |
| Art Unit               | 2611          |
| Examiner Name          | Curtis B Odom |
| Attorney Docket Number | 00125         |

Sheet 1 of 6

**U. S. PATENT DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|--------------------|-----------------------|--|--------------------------------|--|---|
|                    |                       | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
| /CO/               |                       | US- 5,278,862                            | 01-11-1994                     | Timothy J. Vander Mey                              |   |
|                    |                       | US- 5,485,040                            | 01-16-1996                     | Philip H. Sutterlin                                |   |
|                    |                       | US- 5,523,760                            | 06-04-1996                     | McEwan   |   |
|                    |                       | US- 5,554,968                            | 09-10-1996                     | Raymond Lee  |   |
|                    |                       | US- 5,744,526                            | 06-30-1998                     | Michael B Propp et al                              |   |
|                    |                       | US- 5,822,678                            | 10-13-1998                     | Evanyk   |   |
|                    |                       | US- 5,828,946                            | 10-27-1998                     | Feisullin et al.                                   |   |
|                    |                       | US- 5,835,054                            | 11-10-1998                     | Warhus et al.                                      |   |
|                    |                       | US- 5,896,556                            | 04-20-1999                     | Moreland et al.                                    |   |
|                    |                       | US- 5,944,842                            | 08-31-1999                     | Propp et al.                                       |   |
|                    |                       | US- 5,995,534                            | 11-30-1999                     | Fullerton et al.                                   |   |
|                    |                       | US- 6,140,911                            | 10-31-2000                     | Fischer et al.                                     |   |
|                    |                       | US- 6,218,979                            | 04-17-2001                     | Barnes et al.                                      |   |
|                    |                       | US- 6,275,045                            | 08-14-2001                     | Eloy   |   |
|                    |                       | US- 6,360,075                            | 03-19-2002                     | Fischer et al.                                     |   |
|                    |                       | US- 6,384,773                            | 05-07-2002                     | Martin et al.                                      |   |
|                    |                       | US- 6,441,695                            | 08-27-2002                     | Robert Flake                                       |   |
|                    |                       | US- 6,492,897                            | 12-10-2002                     | Richard A Mowery Jr.                               |   |
| /CO/               |                       | US- 6,492,904                            | 12-10-2002                     | Richards   |   |

**FOREIGN PATENT DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Foreign Patent Document   | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>Or Relevant Figures Appear | T <sup>6</sup> |
|--------------------|-----------------------|---|--------------------------------|--|---|----------------|
|                    |                       | Country Code <sup>3</sup> *Number <sup>4</sup> *Kind Code <sup>5</sup> (if known) |                                |  |   |                |
| /CO/               |                       | WO 02/31986   | 04-18-2002                     | XtremeSpectrum                                     |   |                |
| /CO/               |                       | WO 02/49245   | 06-20-2002                     | Pulse-LINK   |   |                |
| /CO/               |                       | WO 96/09694   | 03-28-1996                     | Fullerton et al.                                   |   |                |
| /CO/               |                       | EP 1414241  | 04-28-2004                     | Di Zenobio   |   |                |
|                    |                       |   |                                |  |   |                |
|                    |                       |   |                                |  |   |                |

Examiner  
Signature

/Curtis Odom/

Date  
Considered

04/11/2008

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2

of 6

**Complete if Known**

|                        |               |
|------------------------|---------------|
| Application Number     | 10/820,328    |
| Filing Date            | April 7, 2004 |
| First Named Inventor   | John Santhoff |
| Art Unit               | 2611          |
| Examiner Name          | Curtis B Odom |
| Attorney Docket Number | 00125         |

**U. S. PATENT DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|-----------------------|--------------------------|--|--------------------------------|--|---|
|                       |                          | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
| /CO/                  |                          | US- 6,496,104                            | 12-17-2002                     | Kline  |   |
|                       |                          | US- 6,512,474                            | 01-28-2003                     | Pergande   |   |
|                       |                          | US- 6,515,622                            | 02-04-2003                     | Izadpanah et al.                                   |   |
|                       |                          | US- 6,529,166                            | 03-04-2003                     | Kanamaloru   |   |
|                       |                          | US- 6,539,068                            | 03-25-2003                     | Hebron et al.                                      |   |
|                       |                          | US- 6,571,089                            | 05-2003                        | Richards et al.                                    |   |
|                       |                          | US- 6,586,999                            | 07-04-2003                     | Richley  |   |
|                       |                          | US- 6,678,321                            | 01-13-2004                     | Graham et al                                       |   |
|                       |                          | US- 6,690,247                            | 02-10-2004                     | Kinitis et al.                                     |   |
|                       |                          | US- 6,721,298                            | 04-13-2004                     | Vella-Coleiro                                      |   |
|                       |                          | US- 6,847,267                            | 01-25-2005                     | Robert Flake et al.                                |   |
|                       |                          | US- 6,865,256                            | 03-08-2005                     | Descamps et al.                                    |   |
|                       |                          | US- 6,909,877                            | 06-21-2005                     | Rifheart et al.                                    |   |
|                       |                          | US- 6,968,130                            | 11-01-2005                     | Jin-Yi Pan   |   |
|                       |                          | US- 7,092,693                            | 08-01-2006                     | Boyden et al.                                      |   |
|                       |                          | US- 7,167,525                            | 01-01-2007                     | Santhoff et al.                                    |   |
|                       |                          | US- 2001/0011930                         | 08-09-2001                     | Kintis et al                                       |   |
|                       |                          | US- 2001/0054953                         | 12-27-2001                     | Paul A Kline                                       |   |
| /CO/                  |                          | US- 2002/0024423                         | 02-28-2002                     | Paul A Kline                                       |   |

**FOREIGN PATENT DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Foreign Patent Document   | Publication<br>Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>Or Relevant Figures Appear | T <sup>6</sup> |
|-----------------------|--------------------------|---|-----------------------------------|--|---|----------------|
|                       |                          | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |

Examiner  
Signature

/Curtis Odom/

Date  
Considered

04/11/2008

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

|                        |               |
|------------------------|---------------|
| Application Number     | 10/820,328    |
| Filing Date            | April 7, 2004 |
| First Named Inventor   | John Santhoff |
| Art Unit               | 2611          |
| Examiner Name          | Curtis B Odom |
| Attorney Docket Number | 00125         |

Sheet 3

of 6

**U. S. PATENT DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Document Number<br>Number-Kind Code <sup>2</sup> (if known) | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|--------------------|-----------------------|---|--------------------------------|--|---|
| /CO/               |                       | US- 2002/0075972  | 06-2002                        | Richards et al.                                    |   |
|                    |                       | US- 2002/0191690  | 12-2002                        | Pendergrass et al.                                 |   |
|                    |                       | US- 2002/0097821  | 07-25-2002                     | Hebron et al.                                      |   |
|                    |                       | US- 2002/0116720  | 10-21-2003                     | Cloonan et al.                                     |   |
|                    |                       | US- 2003/0031191  | 02-13-2003                     | El Wardani et al.                                  |   |
|                    |                       | US- 2003/0129978  | 07-2003                        | Akiyama et al.                                     |   |
|                    |                       | US- 2003/0202537  | 10-30-2003                     | Rogerson et  |   |
|                    |                       | US- 2003/0228005  | 12-11-2003                     | Melick et al.                                      |   |
|                    |                       | US- 2004/0125859  | 07-2004                        | Green et al.                                       |   |
|                    |                       | US- 2004/0136438  | 07-15-2004                     | Fullerton et al.                                   |   |
|                    |                       | US- 2004/0142663  | 07-2004                        | Richard D Roberts                                  |   |
|                    |                       | US- 2004/0198260  | 10-2004                        | Molisch et al.                                     |   |
|                    |                       | US- 2004/0233972  | 11-25-2004                     | Karaoguz   |   |
|                    |                       | US- 2004/0233973  | 11-25-2004                     | Fullerton et al.                                   |   |
|                    |                       | US- 2004/174924   | 09-09-2004                     | Lakkis et al.                                      |   |
|                    |                       | US- 2005/0047379  | 03-2005                        | Boyden et al.                                      |   |
|                    |                       | US- 2005/0131922  | 06-2005                        | Kennedy et al.                                     |   |
| /CO/               |                       | US- 2005/069052   | 03-31-2005                     | Carbonari  |   |
|                    |                       | US-   |                                |  |   |

**FOREIGN PATENT DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Foreign Patent Document<br>Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>Or Relevant Figures Appear | T <sup>6</sup> |
|--------------------|-----------------------|--|--------------------------------|--|---|----------------|
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |
|                    |                       |  |                                |  |   |                |

Examiner  
Signature

/Curtis Odom/

Date  
Considered

04/11/2008

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |      |                          |               |
|--|------|--------------------------|---------------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(Use as many sheets as necessary)</i> |      | <b>Complete if Known</b> |               |
|  |      | Application Number       | 10/820,328    |
|  |      | Filing Date              | April 7, 2004 |
|  |      | First Named Inventor     | John Santhoff |
|  |      | Art Unit                 | 2611          |
|  |      | Examiner Name            | Curtis B Odom |
| Sheet 4  | of 6 | Attorney Docket Number   | 00125         |

| NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---------------------------------|-----------------------|---|----------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.   | T <sup>2</sup> |
| /CO/                            |                       | ECHELON, "Powerline Communications", 05-16-19978, 50 pages.   |                |
| /CO/                            |                       | POWERLINE COMMUNICATIONS, "Powerline Coexistence", White paper, 03-2001, 12 pages.  |                |
| /CO/                            |                       | DAN RAPHAELI & EVGENI BASSIN, "A Comparison between OFDM, Single Carrier, and Spread Spectrum for High Data Rate PLC", 04-1999, White paper, 6 pages.   |                |
| /CO/                            |                       | MATTHEW WELBORN, "An M-ary Bi-Orthogonal Ultrawideband Communications System", Provisional Application 60/357,638,2/20/2002, pages 1-40.  |                |
| /CO/                            |                       | GO HARA, YOSHIHIRO HASE, SHINGO OOMORI, FUJINOBU TAKAHASHI & RYUJI KOHNO, "Foundation Study on the Application of UWB Impulse Radio to ROF", 2002 Society of Electronics, Information and Communication Engineers General Conference, March 27-30, 2002, 2 pages. |                |
| /CO/                            |                       | WIN MOE Z et al., "Ultra-Wide Bandwidth Time-Hopping Spread-Spectrum Impulse Radio for Wireless Multiple-Access Communications", April 2000.  |                |
| /CO/                            |                       | STEPHEN GROSSMAN, Existing In-Home Coax Can Support Data Comm, Electronic Design, March 5, 2001, 3 pgs  |                |
| /CO/                            |                       | AUTOMATION SECURITIES AND TECHNOLOGY, homeautomation.net, 5 pgs   |                |
| /CO/                            |                       | KEN DAVIDSON, CEBus Goes Coax, The Computer Applications Journal, February/March 1992, 3 pgs, Issue 25  |                |
| /CO/                            |                       | JULIE JACOBSON, Coax Gaining Favor for In-Home Networks, Home Networking News, June 2002, 5 pgs   |                |

|                    |               |                 |            |
|--------------------|---------------|-----------------|------------|
| Examiner Signature | /Curtis Odom/ | Date Considered | 04/11/2008 |
|--------------------|---------------|-----------------|------------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

|                        |               |
|------------------------|---------------|
| Application Number     | 10/820,328    |
| Filing Date            | April 7, 2004 |
| First Named Inventor   | John Santhoff |
| Art Unit               | 2611          |
| Examiner Name          | Curtis B Odom |
| Attorney Docket Number | 00125         |

Sheet 5

of

6

**NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|--------------------|-----------------------|---|----------------|
| /CO/               |                       | BUSINESS WIRE, Entropic to Detail 270Mbps Home Networking Over COax at Communications Design Conference Wednesday, March 31, March 30, 2004, 2 pgs  |                |
| /CO/               |                       | ENTROPIC COMMUNICATIONS, Core Technology Description, entropic-communications.com, 2 pgs  |                |
| /CO/               |                       | JULIE JACOBSON, Coax Gets Consortium of its Own, Home Networking News, May 2001, 2 pgs  |                |
| /CO/               |                       | NOAM GERI, Hybrid Coax-Wireless Multimedia Home Networks Using 802.11 Technology, Texas Instruments White Paper, March 2003, 7 pgs  |                |
| /CO/               |                       | COAXSYS, 10/100 Ethernet Products, coaxsys.com, 2pgs  |                |
| /CO/               |                       | PRNEWswire, True Plug & Play Home Multimedia Network Debuts at NCTA, Silicon Strategies, May 4, 2004, 3 pgs   |                |
| /CO/               |                       | YUE GUANG-RONG & GE L I-JIA, "Summaries of Ultra-Widebandwidth Radio", Journal of PLA University of Science and Technology, Volume 3 Number 2, April 2002, 6 pages.   |                |
| /CO/               |                       | China Academic Journal Electronic Publishing House, CATV AND NETWORK, 2001, 3 pages.  |                |
| /CO/               |                       | "CRAMER, J.M.; et al., ""On the analysis of UWB communication channels"", Military Communications Conference Proceedings, 1999. MILCOM 1999. IEEE Volume 2, 31 Oct.-3 Nov. 1999 Page(s):1191 - 1195 vol. 2"   |                |
| /CO/               |                       | SCHUTT-AINE, J.E., "High-frequency characterization of twisted-pair cables", Communications, IEEE Transactions on Volume 49, Issue 4, April 2001 Page(s):598 - 601.   |                |

|                    |               |                 |            |
|--------------------|---------------|-----------------|------------|
| Examiner Signature | /Curtis Odom/ | Date Considered | 04/11/2008 |
|--------------------|---------------|-----------------|------------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |      |                          |               |
|--|------|--------------------------|---------------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(Use as many sheets as necessary)</i> |      | <b>Complete if Known</b> |               |
|  |      | Application Number       | 10/820,328    |
|  |      | Filing Date              | April 7, 2004 |
|  |      | First Named Inventor     | John Santhoff |
|  |      | Art Unit                 | 2611          |
|  |      | Examiner Name            | Curtis B Odom |
| Sheet 6  | of 6 | Attorney Docket Number   | 00125         |

| NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---------------------------------|-----------------------|---|----------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| /CO/                            |                       | "KAVEHRAD, M., et al. ""10 Gbps transmission over standard category-5 copper cable"", Global Telecommunications Conference, 2003. GLOBECOM ""03. IEEE Volume 7, 1-5 Dec. 2003 Page(s):4106 - 4110 vol.7"  |                |
| /CO/                            |                       | WIN, M.Z.; SCHOLTZ, R.A., "Impulse radio: how it works", Communications Letters, IEEE, Volume 2, Issue 2, Feb. 1998 Page(s):36-38   |                |
| /CO/                            |                       | SIWIAK K. et al., "Ultra-wide band radio: the emergence of an important new technology", Vehicular Technology Conference, 2001. VTC 2001 Spring. IEEE VTS 53rd, Volume 2, 6-9 May 2001 Page(s):1169 -1172 vol.2   |                |
| /CO/                            |                       | ENGLER, H.F. JR., "Advanced technologies for ultra wideband system design", Electromagnetic Compatibility, 1993. Symposium Record. 1993 IEEE International Symposium on 9-13 Aug. 1993 Page(s):250 - 253 vol.2  |                |
| /CO/                            |                       | Belden Cable, Detailed Specifications & Technical Data Category 5E and 6 twisted pair cable, 5 pages  |                |
| /CO/                            |                       | SIWIAK, "Ultra-wide band radio: introducing a new technology", Vehicular Technology Conference, 2001. VTC 2001 Spring. IEEE VTS 53rd Volume 2, 6-9 May 2001 Page(s):1088 -1093 vol.2  |                |
| /CO/                            |                       | MITCHELL, Broad is the way [ultra-wideband technology]; IEEE Review Volume 47, Issue 1, Jan 2001 Page(s):35-39  |                |
| /CO/                            |                       | BRUNO PATTAN, "A Brief Exposure to Ultra-Wideband Signaling", Microwave Journal, December 2003, 5 pages.  |                |
| /CO/                            |                       | DAVID LEEPER, "Wireless Data Blaster", Scientific American, May 2002, pages 64-69   |                |
|                                 |                       |   |                |

|                    |               |                 |            |
|--------------------|---------------|-----------------|------------|
| Examiner Signature | /Curtis Odom/ | Date Considered | 04/11/2008 |
|--------------------|---------------|-----------------|------------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.